Department of Energy

Ohio Field Office
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DEC 12 2006

Mr. James A. Saric, Remedial Project Manager
United States Environmental Protection Agency
Region V-SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

DOE-0091-07

Mr. Thomas Schneider, Project Manager
Ohio Environmental Protection Agency
Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

TRANSMITTAL OF RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS AND THE FINAL CERTIFICATION REPORT FOR AREA 6 GENERAL AREA WEST, REVISION 0

References:

1) Letter DOE-0031-07, J. Reising to J. Saric/T. Schneider, "Transmittal of the Draft Certification Report for Area 6 General Area West," dated October 25, 2006

2) Letter, J. Saric to J. Reising, "Area 6 General Area West Certification Report," dated November 8, 2006

3) Letter DOE-0064-07, J. Reising to J. Saric/T. Schneider, "Transmittal of Responses to U.S. Environmental Protection Agency Comments on the Draft Certification Report for Area 6 General Area West," dated November 14, 2006

4) Letter, J. Saric to J. Reising, "Area 6 General Area West Certification Report RTC," dated November 29, 2006

5) Letter, T. Schneider to J. Reising, "Disapproval – Draft Certification Report for Area 6 General Area West," dated November 29, 2006

Enclosed for your approval are responses to Ohio Environmental Protection Agency (OEPA) comments and the final Certification Report for Area 6 General Area West. This final report incorporates the responses to comments from both OEPA and U.S. Environmental Protection Agency (EPA), which have already approved the response to their comments as noted in Reference 4.

It should be noted that a correction to the number of certification units was made within the text of this final report in response to OEPA Comment Number 4, which was different than the approved responses to comments from the EPA.

If you have any questions or require additional information, please contact me at (513) 648-3139.

Sincerely,

Johnny W. Reising
Director

Enclosures

cc w/enclosures:
J. Desormeau, DOE-OH/FCP
T. Schneider, OEPA-Dayton (three copies of enclosures)
G. Jablonowski, USEPA-V, SRF-5J
M. Cullerton, Tetra Tech
M. Shupe, HSI GeoTrans
S. Helmer, ODH
AR Coordinator, Fluor Fernald, Inc./MS12

cc w/o enclosures:
J. Chiou, Fluor Fernald, Inc./MS90
F. Johnston, Stoller, Inc./MS12
P. Mohr, Fluor Fernald, Inc./MS1
T. Terry,./ Fluor Fernald, Inc MS1

RESPONSES TO THE OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE DRAFT CERTIFICATION REPORT FOR THE AREA 6 GENERAL AREA WEST

FERNALD CLOSURE PROJECT
FERNALD, OHIO

DECEMBER 2006

U.S. DEPARTMENT OF ENERGY

RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE DRAFT CERTIFICATION REPORT FOR THE AREA 6 GENERAL AREA WEST (20600-RP-0009, REVISION A)

Specific Comments:

1. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: ES Pg #: ES-1 Line #: 14-18 Code: C
Original Comment #: 1
Comment: Provide a description of each of the five sub areas, as done in previous certification reports, for A6 General Area West.

Response: Agree.

Action: A description of each of the five sub-areas will be included in the Executive Summary.

2. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: ES Pg #: ES-1 Line #: 16-18 Code: C
Original Comment #: 2
Comment: This Certification Report is lacking information in regarding the utility trench excavation and certification sampling. Add in the text, which six CUs were constructed from the utility excavation, when did the utility excavation take place, when were the certification samples collected and from which CU, and provide a reference for the utility figures in the text.

Response: Agree. Additionally, the document states that there are only 6 Utility CUs when, in fact, there are nine. The details, including date ranges of the Utility CUs, will be included in the text.

Action: Figure 2-12 will be added to show where the Utility CUs were located within Area 6 General Area West. Also, Figures 2-7 through 2-10 will be modified to show the boundaries of the nine Utility CUs. The text in Section 2 will be revised to reference these figures and details of the date ranges relative to the Utility CUs will be added.

3. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: 1.3 Pg #: 1-1 Line #: 35-36 Code: C
Original Comment #: 3
Comment: Provide a description of each of the five sub areas, as done in previous certification reports, for A6 General Area West.

Response: Agree.

Action: A description of each of the five sub-areas will be included in the Section 1.3.

4. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: 1.4 Pg #: 1-2 Line #: 5-9 Code: C
Original Comment #: 4
Comment: The number of CUs in the text does not match the documents Figures. Make the appropriate corrections.

Response: Agree. There are a total of 36 CUs; 26 Group 1 CUs, 9 Utiltiy CUs, as well as 1 pile CU (CU 23P).

Action: The text in the Executive Summary and Sections 1.4, 1.5, 2.2.1, and 5.1 will be revised to resolve this discrepancy.

5. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: Figure 1-1 or additional Figure Pg #: Line #: Code: C
Original Comment #: 5
Comment: This certification report needs to either include an additional Figure or add to Figure 1-1 the specific sub areas located in Area 6 General Area West. Previous certification reports have incorporated this information. Again, the total number of CUs discussed in this section does not correspond with the documents figures.

Response: Agree. A figure of the specific sub areas is needed. Figure 1-3 will be added to depict the sub areas. See response to comment 4 regarding the total number of CUs.

Action: Figure 1-3 will be added to depict the specific sub areas. See action to comment 4 regarding the total number of CUs.

6. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: 2.0 Pg #: figs Line #: NA Code: C
Original Comment #: 6
Comment: No figures are included showing the sample locations for A6GAW-C23P or BSL-C01 through BSL-C04.

Response: Agree.

Action: Figures 2-11 and 2-12 will be added to show the sample locations for the 4 BSL CUs and the sample locations for A6GAW-C23P will be added to Figure 2-5.

7. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: 2.2.1 Pg #: 2-2 Line #: 8-14 Code: C
Original Comment #: 7
Comment: Provide in this section which CUs and/or sub areas the 6 utility trenches were located.

Response: Agree. See response to Comment #2.

Action: Agree. See action to Comment #2.

8. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: 2.2.1 Pg #: 2-2 Line #: 8 Code: C
Original Comment #: 8
Comment: Text states 26 CUs were evaluated, however data for 4 CUs from the BSL are also presented in Appendix A for a total 30 CUs

Response: See response to comment 4.

Action: See action to comment 4.

9. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: 2.2.3 Pg #: 2-3 Line #: 4 Code: C
Original Comment #: 9
Comment: Text states locations A6GAW-C23-10 and A6GAW-C23-11 were not sampled as described in Section 2.2.2. No explanation or reference is provided for how the collection of these samples varied from the standard procedure.

Response: Agree.

Action: The text will be changed to read:

"The majority of the samples were collected from the 0 to 6-inch surface soil interval at the designated and surveyed location, as described in Section 2.2.2 of this document. Exceptions include the certification locations designated as archive samples, which were identified in the field but not collected at this time because 12 samples generally suffice to meet the statistical certification criteria. Also, per Section 4.1.2 of the CDL/Certification PSP for Area 6 General Area West, at locations A6GAW-C23-10 and A6GAW-C23-11 in CU 23 samples were collected from the overburden and at the surface that existed prior to the placement of the overburden. The samples collected from the overburden are being associated with CU 23P and the samples collected from the pre-existing surface are being associated with CU 23. All collected samples were analyzed at an off-site laboratory..."

10. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: Table 2-1 Pg #: 2-5 Line #: Code: C
Original Comment #: 10
Comment: Table 2-1 of Area 6 General Area West does not appear to match up with Table 3-3 of the Final CDL & PSP for A6 General Area West (Rev 0, PCN 1). Discrepancies found were as follows:

A) Table 2-1 lists Total U (High Leach) being retained as a primary ASCOC however, in the CDL/PSP it is not in the ASCOC List. In addition, there is no mention in the document about high leachability areas in A6 General Area West .
B) On Table 2-1 Toluene is listed as an ASCOC due to being retained as an ASCOC for the Quonset Hut. Again, Toluene is not listed on the ASCOC list in the Final CDL/PSP nor is the Quonset Hut mentioned anywhere in the certification report.
C) If a contaminant were retained to be on the ASCOC list, wouldn't there be corresponding data and corresponding stats?

Table 2-1 must be rechecked for the above and any other additional errors that may have been made.

Response: Agree.
A) Total U (High Leach) should not have been listed on Table 2-1 as there are no high leachability areas in Area 6 General Area West. However total uranium, regardless of the FRL used, has been retained as it is a side wide primary ASCOC.

B) Toluene should not have been listed on Table 2-1 as it is not an ASCOC for Area 6 General Area West. The Quonset huts were not associated with this area.

C) Yes, if a contaminant were retained as an ASCOC there would be corresponding data and, if necessary, corresponding statistics. All ASCOCs o the table were verified to be accurate as corrected and each ASCOC has corresponding data presented in the Appendices.

Action: Total U (High Leach) and Toluene will be removed from Table 2-1. Also, upon further review, it was noted that benzo(b)fluoranthene had an incorrect FRL listed. The FRL for benzo(b)fluoranthene will be corrected from 200 mg/kg to 20 mg/kg.

11. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: Figure 2-1 Pg #: Line #: Code: C
Original Comment #: 11
Comment: Figure 2-1 is unclear. The Figure is showing two CU 4 locations, one in the BSL and one in the Former SWM Pond. Please make the appropriate corrections on Figure 2-1 and in the text.

Response: The Former SWM Pond CU is identified as A6GAW-C04 and the BSL CU is identified as BSL-C04.

Action: The following footnote will be added to Figure 2-1. "All CUs begin with A6GAW except for the BSL CUs"

12. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: Figures Pg #: Line #: NA Code: C
Original Comment #: 12
Comment: Figures 2-2, 2-3, and 2-5 are unclear. These figures need to point out where Areas 6K, 6G, and 6I are located or provide separate figures with each area and their designated sampling locations.

Response: Figure 1-3 is being added (per response to comment 5) to show the specific sub areas in Area 6 General Area West, which is how the specific sub areas were presented in the CLD/PSP.

Action: Figure 1-3 will be added to show the specific sub areas.

13. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: Figure 2-3 Pg #: Line #: CU17 Code: C
Original Comment #: 13
Comment: CU 17's sampling locations are out of sequence. Locations 1-4, and 16 are not located on the figure. In addition, the text does not mention any changes in sampling locations for this CU. Please clarify.

Response: There were no changes in the sampling locations for CU 17. The locations are out of sequence because the original CU 17 was re-delineated into two CUs, CU 17 and CU 17A, per DOE's response to OEPA's Comment #2 and Comment #6 to the Draft Certification Letter and Certification Project Specific Plan submitted July 31, 2006.

Action: None.

14. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: 3.2 Pg #: 3-2 Line #: 10 Code: C
Original Comment #: 14
Comment: Text states UCL for secondary sampling at A6GAW-C21 for Radium-226 is 1.678, whereas statistics table in Appendix A, page A.2.3 shows the UCL as 1.702.

Response: Agree.

Action: The text will be corrected.

15. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: 3.2 Pg #: 3-2 Line #: 14-17 Code: C
Original Comment #: 15
Comment: This paragraph is lacking in detail. Further discussion is needed regarding CU 16 and the collection of additional readium-226 samples due to the CU failing the UCL, the *a posteriori* test and the high variability in the data. Nothing is mentioned regarding sample results or whether the CU passed or failed.

Response: Section 3.2 discusses changes to the scope of work, which provides a summary of each variance/field change notice, and Section 5 provides a summary of the analytical results and statistical analysis for each CU.

Action: This paragraph will be revised to read:

"The data for CU 16 demonstrated a failing condition for the *a posteriori* test for radium-226 thus indicating a high variability in the data and the need to collect additional samples from this CU for radium-226. It also indicated the UCL on the mean as being 1.818 pCi/g which is greater than the FRL. Variance 20600-PSP-0020-4 documents the collection of the four archive samples in CU 16 for radium-226. The results from the newly collected samples in these sub-CUs were included in the statistical analysis of CU 16."

16. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: 5.1 Pg #: 5-1 Line #: 24-30 Code: C
Original Comment #: 16
Comment: Please include, in this section, which CUs exceeded for radium-226 and arsenic FRLs.

Response: Agree. There were also exceedences for total uranium and beryllium, which will be included in this section.

Action: This section will be revised to read:

"UTILITIES
During utility removal, samples were collected from the bottom of the trenches to certify the soil footprint under the utilities. The data were partitioned into nine CUs, as shown on Figures 2-1 and 2-7 through 2-10.

Two Utility CUs, CU02 and CU03, did not have any FRL exceedences. Seven Utility CUs, CU01 and CU04 through CU09, had FRL exceedences; CU01 had exceedences for total uranium and arsenic, CU04 had a radium-226 exceedence, CU05 had exceedences for radium-226 and arsenic, CU06 had a total uranium exceedence, CU07 had exceedences for radium-226 and arsenic, CU08 had exceedences for arsenic and beryllium, and CU09 had exceedences for arsenic. All of the CUs pass certification with the exception of arsenic in CU01. Arsenic in CU01 fails the 90 percent UCL and hotspot criteria. However, no further action will be taken because the 90 percent UCL of the mean (13.8 mg/kg) is less than the maximum background value of 15.8 mg/kg. The data and statistical evaluations are presented in Appendix B."

17. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: Ap. A.1 Pg #: NA Line #: NA Code: C
Original Comment #: 17
Comment: Maximum values shown in Statistics Tables are incorrect for A6GAW-C17 (Radium-228 Max. = 0.872, table shows 0.883; Thorium-228 Max. = 0.884, table shows 0.918; Thorium-232 Max. = 0.872, table shows 0.883; Uranium, Total Max. = 24.6, table shows 26.8; Technetium-99 Max. = 1.04, table shows 1.76; Lead-210 Max. = 1.61, table shows 1.67; Antimony Max. = 0.486 U, table shows 0.504 U), A6GAW-C17A (Cadmium Max. = 0.23, table shows 0.25; Silver Max. = 0.137 U, table shows 0.057), A6GAW-C23 (Uranium, Total Max. = 28.5, table shows 26.4), A6GAW-C23P (Technetium-99 Max. = 0.877, table shows 0.453 U; Aroclor-1254 Max. = 4.13 U, table shows 2.065 U), BSL-C01 (Uranium, Total Max. = 26.8, table shows 2.8), and BSL-C02 (Uranium, Total Max. = 7.74, table shows 2.8).

Response: Agree.

Action: Appendix A.1 will be corrected.

18. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: Ap. A.1 Pg #: NA Line #: NA Code: C
Original Comment #: 18
Comment: Units listed for BSL-C02 Uranium, Total are incorrect.

Response: Agree.

Action: The units will be corrected.

19. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: Ap. A.1 Pg #: NA Line #: NA Code: C
Original Comment #: 19
Comment: *a posteriori* Sample Sizes calculated from data do not match Sample Size calculations shown in Statistics Tables for A6GAW-C04 Uranium, Total; A6GAW-C14 Radium-226, Radium-228, Thorium-228, and Thorium-232; A6GAW-C15 Uranium, Total; A6GAW-C16 Radium-226; A6GAW-C20 Radium-226; and A6GAW-C21 Radium-226.

Response: The *a posteriori* sample size is correct as presented in the document for these parameters.

Action: None

20. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: Ap. A.2 Pg #: A.2.1-3 Line #: NA Code: C
Original Comment #: 20
Comment: *a posteriori* Sample Sizes calculated from data do not match Sample Size calculations shown in Statistics Tables for secondary sampling for A6GAW-C16 Radium-226 and A6GAW-C20 Radium-226.

Response: The *a posteriori* sample size is correct as presented in the document.

Action: None

21. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: Ap. A.2 Pg #: A.2.2 Line #: NA Code: C
Original Comment #: 21
Comment: *a posteriori* Sample Size calculation for secondary sampling for A6GAW-C20 Radium-226 fails certification. 13 samples are required to pass; only 12 samples were used in statistical calculations.

Response: The *a posteriori* sample size is correct as presented in the document.

Action: None

22. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: Ap. A.3 Pg #: A.3.1 Line #: NA Code: C
Original Comment #: 22
Comment: *a posteriori* Sample Size calculated from data does not match Sample Size calculation shown in Statistics Tables for tertiary sampling for A6GAW-C21 Radium-226.

Response: The *a posteriori* sample size is correct as presented in the document.

Action: None

23. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: Ap. A.3 Pg #: A.3.1 Line #: NA Code: C
Original Comment #: 23
Comment: *a posteriori* Sample Size calculation for tertiary sampling for A6GAW-C21 Radium-226 fails certification. 18 samples are required to pass; only 16 samples were used in statistical calculations.

Response: The *a posteriori* sample size is correct as presented in the document.

Action: None

24. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: Ap. B Pg #: B-1 Line #: NA Code: C
Original Comment #: 24
Comment: a posteriori Sample Size calculated from data does not match Sample Size calculation shown in Statistics Tables for Utility Trench C01 Arsenic and C09 Arsenic.

Response: The *a posteriori* sample size is correct as presented in the document.

Action: None

25. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: Ap. B Pg #: 30 of 84 Line #: NA Code: C
Original Comment #: 25
Comment: Maximum value (A6GA-T-16 = 1.81) > FRL (1.5) for Utility Trench C08 Beryllium but no statistics calculated.

Response: Agree. The statistical analysis that should have been performed on beryllium for Utility Trench CU08, which demonstrates passing conditions, will be included in the table.

Action: Appendix B will be revised to include the statistical analysis for beryllium.

26. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: Ap. B Pg #: 52 of 84 Line #: NA Code: C
Original Comment #: 26
Comment: Maximum value (A6GA-T-101 = 0.00808) > FRL (0.008) for Utility Trench C03 Octachlorodibenzo-p-dioxin but no statistics calculated.

Response: The maximum value for octachlorodibenzo-p-dioxin was 0.00808 mg/kg for Utility CU03 which is less than the FRL of 0.0088 mg/kg. Therefore, no statistics are necessary.

Action: None.

27. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: Ap. B Pg #: 76 of 84 Line #: NA Code: C
Original Comment #: 27
Comment: Maximum value (A6GA-T-147 = 1.56) > FRL (1.5) for Utility Trench C01 Thorium-232 but no statistics calculated.

Response: Location A6GA-T-147 was excavated and re-sampling was performed at the original location (A6GA-T-147-1) and at another random location (A7GA-T-147-2). These two samples were treated as duplicates and the highest from the two locations was used when calculating statistics for radium-226, radium-228, thorium-228, throrium-232, and total uranium. This was noted in the result field of Appendix B for radium-226 and should have also been noted for radium-228, thorium-228, thorium-232, and total uranium.

Action: The result column in Appendix B will be updated to note the locations that were excavated.

28. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.`
Section #: Ap. B Pg #: 82 & 83 of 84 Line #: NA Code: C
Original Comment #: 28
Comment: Maximum value for Utility Trench C01 (A6GA-T-147 = 114) and C06 (A6GA-T-150 = 100) Uranium, Total > FRL (82) but no statistics calculated.

Response: Utility Trench C01 (A6GA-T-147 = 114) was excavated, therefore this value will not be included in the statistical analysis. (See comment #27.) However, Utility Trench C06 (A6GA-T-150 = 100) and Utility Trench C01 (A6GA-T-161 = 82.9) were both above FRL. The statistical analyses that should have been performed on total uranium for Utility Trench C06 and C01, which demonstrate passing conditions, will be included in the Appendix.

Action: Appendix B will be revised to include the statistical analysis for both Utility Trench C06 total uranium and Utility Trench C01 total uranium.